

Rural inequalities in cancer care and outcome

We need improved primary care, access to expert multidisciplinary services, and appropriate coordination of the two

More than a third of Australians live outside major cities, with 3% living in remote or very remote areas.¹ The health disadvantage of rural and remote Australians is well documented, and includes poorer survival after a diagnosis of cancer.² Both more advanced cancer at diagnosis and poorer treatment appear to contribute.³ Documented instances of poorer cancer care in rural and remote Australia, though not necessarily all with survival implications, include less “state of the art” diagnosis, staging and treatment of prostate cancer;⁴ less breast-conserving surgery for breast cancer;⁵ and an apparently lower probability of completing treatment when referred for radiotherapy for rectal cancer.⁶ Surprisingly, there appears to be little difference in women’s use of breast and cervical screening by area of residence.⁷

Remoteness of residence is not the only axis of disadvantage that may contribute to poorer cancer outcome in remote areas. Indigenous Australians account for 26% of the population in these areas, and have poorer survival from cancer than other Australians.^{1,8} Lower socioeconomic status is also associated with rural and remote residence and poorer survival.² Poorer treatment may explain these worse outcomes. Analysis of linked cancer registry and hospital inpatient records in Western Australia suggests that Indigenous cancer patients are less likely to have surgery for lung cancer or radical surgery for prostate cancer,⁹ but there was no significant difference in breast-conserving surgery for breast cancer.⁹ Although that study could not address the possibility that differences in stage at diagnosis explained the observed treatment differences, a Sydney study has shown, after adjustment for size and stage of cancer, that socially disadvantaged women with breast cancer are still less likely to have breast-conserving surgery.¹⁰

Factors that underlie Indigenous and socioeconomic disadvantage in cancer survival, and possibly treatment, may go beyond just remoteness of residence and inability to pay. They could include knowledge, attitudes and beliefs about cancer (which may influence presentation for and acceptance or completion of recommended treatment), communication difficulties, and discrimination on the basis of race or socioeconomic status for access to travel support or more expensive care.^{9,11}

In principle, tackling rural inequality in cancer care and outcome requires a combination of improved primary healthcare, access to expert multidisciplinary services, and coordination of the two. Evidence that could guide investment decision-making is limited. Present rural health policy is underpinned by the principle that patients should have access to high quality services as close to their homes as is clinically and geographically feasible. This policy should improve access to primary healthcare and aid in obtaining earlier diagnosis of cancer and quicker referral to expert care. That these factors will improve cancer outcomes is, however, more an article of faith than supported by evidence. Increasing specialist healthcare services in rural areas may also run counter to evidence that, for some cancers at least, the best outcome is obtained by practitioners and institutions that have high caseloads.¹² Specialist medical services of all kinds are rare outside cities and large rural centres in Australia and are likely to remain so, and cancer surgery caseloads are low in a high proportion of hospitals in rural New South Wales and Victoria.^{6,13}

Problems of low caseloads can be overcome to some degree by specialist outreach services and shared-care arrangements, in which initial treatment often requires travel to a major centre, but subsequent treatment can be delivered effectively closer to home and partly by local healthcare practitioners. Available evidence suggests that specialist outreach services can increase the proportion of patients receiving breast cancer care consistent with evidence-based guidelines.¹⁴ More generally, it appears that specialist outreach services that interact in a shared-care model with primary healthcare providers, such as Aboriginal health workers, can improve healthcare access for remote Aboriginal communities.¹⁵ A trial of breast cancer nurses in rural settings has also shown clear psychological and physical benefits to women and more coordinated care among practitioners.¹⁶ Developing the role of specialty oncology nurses in care coordination and administration of chemotherapy in rural areas is supported by oncologists, but has not been fully evaluated.¹⁷

Moves have been made to define a more coherent approach to cancer service delivery,¹⁸ but there is little evidence of successful implementation. So what, in principle, do we need? Conceptually, a well-defined pathway, appropriately tailored to needs, that each person with cancer can easily follow to timely expert care. Practically, this requires that the person and their primary care provider know how to access the pathway, that the person’s journey along it is carefully guided to ensure he or she does not get lost, and that there is effective communication between all places visited.

Successful development of such pathways would require innovative information systems, effective interaction between the many services involved in cancer care, and cooperation between governments. The challenge in establishing them will be greatest in rural and remote areas. Distance and low service density may make them more difficult to operate; the social and cultural adaptations required may be a hurdle; and they will need to draw more on special provisions, such as shared and outreach care. But the broad principles will be the same. The additional costs, for pathway creation and maintenance, information provision, journey coordination and communication, should not be great, and would probably be repaid by more efficient care and a better outcome. Food for thought?

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